

# Expanplast\* WP400

## Hydrophobic pore-blocking waterproofing admixture

### Uses

Expanplast\* WP400 will drastically reduce water absorption in any type of concrete including structural and precast, especially suitable for below ground structural concrete, reinforce concrete in marine areas, piles, water retaining structures, waste water treatment plants, manholes and desalination plants.

### Advantages

- Provides integral protection against chloride
- Reduced concrete permeability
- Ammonia and bitumen free
- Provides integral protection even if surface damage occurs, unlike applied surface film or coating
- Fully compatible with other Expanchem admixtures and coating

### Description

Expanplast\* WP400 is a chloride free turbid liquid which instantly disperses in water.

Expanplast\* WP400 is an organic liquid which reacts with products of the cement hydration process to produce a hydrophobic material which repels external water, reducing absorption into the concrete.

### Technical support

Expanchem Fospak provides a technical advisory service for on-site assistance and advice on admixture selection, evaluation trials and dispensing equipment.

### Dosage

The optimum dosage of Expanplast\* WP400 to meet specific requirements should always be determined by trials using the materials and conditions that will be experienced in use.

This allows the optimization of admixture dosage and mix design and provides a complete assessment of the mix. The normal dosage range is from 0.50 to 2.00 liters/100 kg of cementitious material, including PFA, GGBFS and microsilica.

### Use at other dosages

Dosages outside the typical ranges quoted above may be used to meet particular mix requirements. Contact Expanchem Fospak for advice in these cases.

### Effects of overdosing

An overdose of double the intended amount of Expanplast\* WP400 will result in a significant increase in retardation as compared to that normally obtained at the intended dosage.

The effects of overdosing will be further increased if sulphates resisting cement or cement replacement materials are used.

### Compatibility

Expanplast\* WP400 is compatible with other Expanchem admixtures used in the same concrete mix. All admixtures should be mixed separately and must not be premixed together; any concrete mix containing more than one admixture should be assessed by the trial mix procedure

Expanplast\* WP400 is suitable for use with all types of Portland cements SRC and cement replacement material such as PFA, GGBFS and microsilica

### Limitation

The use of Expanplast\* WP400 will not make poor quality concrete waterproof, good concrete practice must be followed, good quality sand and crush must be used and minimum cement content should not be less than 300 Kg/m<sup>3</sup>.

### Properties

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Appearance : Turbid / Light Brown

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Specific gravity : Typically 1.05 at 20°C

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### Instructions for use

#### Typical performance example

Expanplast\* WP400 meets the water absorption requirements of the European Standard BSEN934-2

Many variables in concreting materials and conditions can affect the selection and use of an admixture, trials should be carried out using relevant material and conditions in order to determine the optimum mix design and admixture dosage to meet specific requirements.

A typical performance example from evaluating studies of Expanplast\* WP400 is included on this data sheet, the values quoted are representative of results obtained and are provided as illustration of the performance.



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Because of the variability of concreting material, the results should only be taken as typical of the performance to be expected. Results quoted are not necessarily directly comparable with results obtained elsewhere for Expanplast\* WP400 or other products.

The use of a combination of admixtures in the same concrete mix and or cement replacements may alter the setting time. Trials should always be conducted to determine such setting times.

Example: Concrete grade 45/20, 400 Kg. cement 0.38 w/c

Mix	Dosage% WP400*	Dosage% SP432MS*	Absorption %
Control	Nil	1	2.80
With WP400*	1	1	1.20
	2	1	0.60

#### Estimating - packaging

Expanplast\* WP400 is available in 210 liter drums and bulk supply.

#### Storage

Expanplast\* WP400 has a minimum shelf life of 12 months provided the temperature is kept within the range of 2°C to 50°C. after few days of manufacturing Expanplast\* WP400 changes its color turbid to light brown, and the smell of the material will also change, but this change does not effect on quality of product, results of the product will be as per specification.

**Freezing point: Approximately -6°C**

#### Precautions

#### Health and safety

Expanplast\* WP400 does not fall into the hazard classifications of current regulations. However, it should not be swallowed or allowed to come into contact with skin and eyes.

Suitable protective gloves and goggles should be worn. Splashes on the skin should be removed with water. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. If swallowed seek medical attention immediately do not induce vomiting.

For further information consult the Material Safety Data Sheet available for this product.

#### Fire

Expanplast\* WP400 is water based and non-flammable.

#### Cleaning and disposal

Spillages of Expanplast\* WP400 should be absorbed onto sand, earth or vermiculite and transferred to suitable containers. Remnants should be hosed down with large quantities of water.

The disposal of excess or waste material should be carried out in accordance with local legislation under the guidance of the local waste regulatory authority.



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\* Denotes the trademark registered.

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